

What is claimed is:

54B  
A1  
1. A method of preventing particle aggregation of lipid:nucleic acid complex particles, said method comprising the step of incorporating an non-cationic lipid into lipid:nucleic acid complex particles comprising a cationic lipid and a nucleic acid polymer, wherein said additional lipid is a polyethylene glycol-based polymer.

2. The method of claim 1, wherein the polyethylene glycol-based polymer is selected from the group consisting of polyethylene glycol lipids, polyethylene glycol ceramides and ganglioside-modified lipids.

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3. The method of claim 1, wherein the amount of additional lipid is from 1 to 15% of the particles.

4. The method of claim 1, wherein said nucleic acid is selected from the group consisting of DNA and RNA.

5. The method of claim 1, wherein said nucleic acid is DNA.

6. The method of claim 1, wherein said lipid:nucleic acid complex is lyophilized.

7. The method of claim 1, wherein the nucleic acid is linked to an expression vector to facilitate gene expression after entry into a cell.

8. A method of preparing a lipid:nucleic acid complex, comprising the steps of:  
(a) combining a nucleic acid with a cationic lipid to produce a lipid:nucleic acid complex; and  
(b) mixing the lipid:nucleic acid complex with a non-cationic lipid which is a

polyethylene glycol-based polymer, wherein the polyethylene glycol-based lipid reduces the tendency of the lipid:nucleic acid complex to aggregate.

9. The method of claim 8, wherein the polyethylene glycol-based polymer is selected from the group consisting of polyethylene glycol lipids, polyethylene glycol ceramides and ganglioside-modified lipids.

10. The method of claim 8, wherein the amount of non-cationic lipid is from 1 to 15%.

11. The method of claim 8, wherein said nucleic acid is selected from the group consisting of DNA and RNA.

12. The method of claim 8, wherein said nucleic acid is DNA.

13. The method of claim 8, wherein said lipid:nucleic acid complex is lyophilized.

14. The method of claim 8, wherein the nucleic acid is linked to an expression vector to facilitate gene expression after entry into a cell.

INEX.P-010